

Environmental Remote Sensing for Monitoring Plant Health (TechID 1900)

The uptake of contaminants by plants can affect their health and how they appear under imaging at different wavelengths of light (e.g., infrared, visible, and ultraviolet). Remote imaging of plants can be deployed to monitor plant health in order to detect presence of contaminants in the environment.



Developers:

- Special Technologies Laboratory/Bechtel Nevada, Santa Barbara, CA

Applications:

- Remote sensors for contaminant detection, e.g., monitoring waste sites and demonstrating restoration of remediated sites at all DOE sites
- Specifically, monitoring landfill covers planted with selected vegetation
- Measurement of crop vitality, e.g., remote sensing of crops and automated greenhouse monitoring

Status:

- Demonstrated Zn stress on beans at EPCOT in March 1998
- Completed two data takes with portable LIF system, July 1998
- Completed Bahia grass baseline and stress measurements, September 1998
- Sensors mounted on a robotics platform being used for automated monitoring
- Final report available from Special Technologies Laboratory (capellga@nv.doe.gov)

